AK Steel Corporation
MIDDLETOWN WORKS
1801 CRAWFORD STREET
MIDDLETOWN, OHIO 45043-0001

October 30, 2017

Compliance Tracker
Air Enforcement and Compliance Assurance Branch
Air and Radiation Division
U.S. EPA – Region 5
77 West Jackson Boulevard
Chicago, IL 60604

Re: **AK Steel Corporation – Middletown Works**
Docket No. CAA-05-2016-0030

To Whom It May Concern:

In accordance with the above referenced Consent Agreement and Final Order, enclosed is the Completion Report for the Supplemental Environmental Project. Please let me know if you have any questions.

Sincerely,

Chris Potts
Senior Environmental Engineer
AK Steel - Middletown Works

Cc: P. Gallo
S. Wesloh

SEP COMPLETION REPORT
Upgrading the Pushing Emissions Control (PEC) Hood
at the Wilputte Coke Battery, Middletown, Ohio Facility

Introduction

The Wilputte Coke Plant at Middletown Works includes a 76 oven battery, complete with a larry car to charge the ovens, coke pusher, coal bunker, door machine, quench car, and emissions control system. The emissions control system consists of five (5) baghouse modules, each with its own induced draft fan with a capability of 40,000 acfm. The main duct runs parallel to the battery and is equipped with a traveling hood that runs the length of the battery.

Prior to pushing the coke, the traveling hood is aligned with the coke door and guide to ensure capture of emissions. Once the hood is aligned, the coke oven door is removed and the coke is pushed through the guide into the quench car. As coke is pushed from the oven, the quench car is moved at a slow pace to ensure even distribution in the car. When the all the coke has been pushed from the oven, the car will sit beneath the hood for a short period to collect additional emissions prior to moving to the quench tower. A new hood was designed and installed to increase the capture efficiency of the system.

Following is the information required by the Consent Agreement and Final Order for this SEP Completion Report.

a. Detailed description of the SEP as completed

The new hood was assembled for installation the week of August 21, 2017.

Removal of the existing hood occurred on August 28 and 29, 2017.

Installation of the new hood began on August 29, 2017.

Maintenance personnel conducted clearance checks with the quench car and coke guide and performed field modifications on August 30 and 31, 2017.

The Coke battery began utilizing the new hood during pushing operations starting on September 1, 2017.

b. Description of operational problems and actions taken to correct the problems

Due to tighter clearances with the new hood and variations in the quench car and door machine tracks, some modification to the quench car and coke guides had to be made to clear the hood. The in-field modifications to the quench car and coke guides did not adversely impact the capture efficiency of the new hood.

c. Itemized cost of goods and services used to complete the SEP

As detailed below, AK Steel spent a total of $518,796.48 on the SEP. Of this total, $103,771 was spent on detailed engineering. Thus, AK Steel satisfied the expenditure requirements of Paragraph 45 of the CAFO. Copies of the invoices are included on the enclosed flash drive.

MIDDLETOWN WORKS
COKE PLANT
INSTALLATION OF A NEW TRAVELING HOOD

RES MW 2999
COST RECORD

PURCHASE ORDER NO.	VENDOR NAME	DESCRIPTION	P.O. AMOUNT	INVOICE NO.	INVOICE AMOUNT	COMMITTED
28P16032758	Middough Inc.	Preliminary Engineering of hood	$97,800.00	154996	$4,107.10	$4,107.10
28P16035949	SNC Lavalin	Hood Design Report and Detailed Engineering	$105,300.00	2003932	$20,499.17	$20,499.17
				2004134	$19,695.66	$19,695.66
				2004469	$13,161.62	$13,161.62
				2004723	$4,885.71	$4,885.71
				2005394	$2,499.45	$2,499.45
				2006902	$38,922.69	$38,922.69
28P17022371	MTR Martco	Hood supply and fabrication	$84,255.00	43628	$84,255.00	$84,255.00
28P17037053	McGraw Kokosing	Traveling Hood Installation	$648,384.00	1708-083	$14,962.70	$14,962.70
				1708-108	$206,018.12	$206,018.12
		Remaining Contractor Fee		1710-000	$109,789.26	$109,789.26
		TOTAL COST			**$518,796.48**	**$518,796.48**

d. Description of the environmental and public health benefits resulting from the SEP.

As discussed in detail in the *Emission Control System Evaluation and Computational Fluid Dynamic Modeling Report* prepared by SNC Lavalin America and submitted to U.S. EPA on November 29, 2016, the capture efficiency of the new, more efficient hood, is expected to improve up to 26% compared to the prior hood.

e. A video recording of, at a minimum, five pushes using the existing hood, and five pushes after the new hood begins operation.

Digital files of the video recordings are included on the enclosed flash drive.

CERTIFICATION

The "Installation of the Upgrades to the Pushing Emissions Control (PEC) Hood at the Wilputte Coke Battery" SEP has been completed in compliance with the Consent Agreement and Final Order.

I certify that I am familiar with the information in this document and that, based on my inquiry of those individuals responsible for obtaining the information, it is true and complete to the best of my knowledge. I know that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Dale Rupp

Dale Rupp
General Manager
AK Steel Corporation – Middletown Works

10/30/17.

Date